

HARFORD COUNTY GOVERNMENT DIVISION OF BUILDING SERVICES

RECOMMENDED DECK CONSTRUCTION GUIDELINES

GENERAL REQUIREMENTS

- All portions of decks constructed on townhomes shall be a minimum of 24 inches from the property line.
- All fasteners shall be galvanized or of an approved material to prevent rusting.
- All engineered connectors such as joist hangers shall be inspected and approved through a recognized third party inspection process and installed with manufacture approved fasteners.
- All wood must be approved naturally decay resistant, treated southern yellow pine or approved pre-engineered material.

FOOTINGS

Concrete footings are required under all support posts. Footings must extend a minimum of 30 inches below the final grade, have an average thickness of 8 to 12 inches and be a minimum of 16 inches in diameter. Where the footing is to support both a deck and a roof covering, footings shall be a minimum of 24 inches in diameter. Larger footings may also be required for decks with large spans between posts and/or extend more than 14 feet out from the house. All footings must be placed on stable compacted soil. Footings shall be independent of all concrete patios that are not protected from frost heave.

POSTS

Post sizes of 4x4 and 4x6 are acceptable for unsupported lengths up to 8 feet. A nominal post size of 6x6 is necessary for unsupported lengths between 8 and 13 feet. Post spacing will depend upon the size of beam selected and the total area of the deck. Use the following table for TYPICAL spacing of posts. All posts must rest on top of the footing and be secured in place. Concrete SHOULD NOT be poured around wooden posts.

Beam Size	Double 2x8	Double 2x10	Double 2x12
Post Spacing	6 foot	8 foot	10 foot

BEAMS

Beams comprised of multiple members shall be fastened together with three (3) 10d galvanized nails 24 inches o/c. For multiple member beams where each member is attached to each side of the post, blocking must be provided and attached between each ply a maximum of 24 inches o/c. All splices shall be aligned over post supports. Beams shall be attached to support posts with an engineered connector, (2) ½ inch carriage bolts when side mounted or (2) ½ inch lag bolts when supported by a notch in the post. Beams may be cantilevered a maximum of 1 foot.

LEDGER BOARDS

Decks designed to be structurally supported from existing construction, a ledger board the same size as the deck floor joists must be provided. The ledger must be secured using ½ inch carriage bolts staggered 20 inches on center. Optional ½ inch lag bolts spaced 16 inches o/c may be substituted when the existing construction affords sufficient structural material for attachment. Ledgers must have sufficient flashing to prevent moisture damage to unprotected construction. Floor systems constructed with floor trusses, I-joints or specialized construction methods may require alternative attachment methods.

NOTE Decks may NOT be supported by existing cantilevered construction. An additional post and beam system at these areas will be required to support the imposed deck loads.

FLOOR JOISTS

Floor joists span and spacing shall not exceed the following table or the manufacturer's recommendations. All joists shall be toe nailed to the beam with three (3) 8d galvanized nails, shall be attached to the ledger with approved joist hangers installed per the manufacturer's instructions and face nailed to the end band with three (3) 16d galvanized nails. Floor joists shall not be cantilevered more than 2 feet.

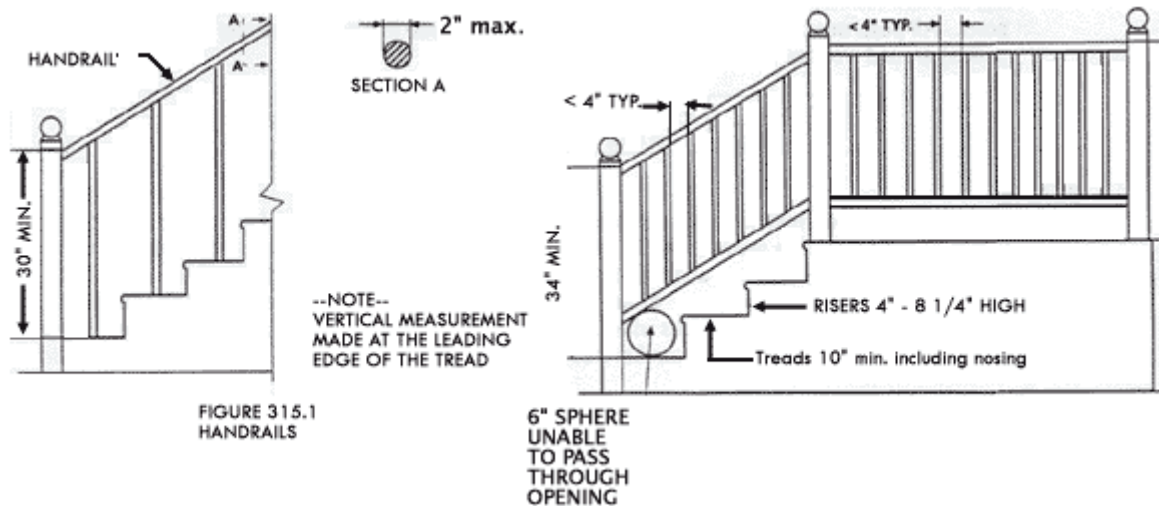
Joint Spacing	2x6		2x8		2x10		2x12	
	#2	#1	#2	#1	#2	#1	#2	#1
12"	9'-3"	9'-8"	12'-3"	12'-9"	15'-7"	16'-3"	19'-0"	19'-9"
16"	8'-1"	8'-5"	10'-7"	11'-0"	13'-6"	14'-0"	16'-6"	17'-2"
24"	6'-7"	6'-10"	8'-7"	9'-0"	11'-0"	11'-6"	13'-5"	13'-11"

STAIRWAYS

Stair must be a minimum of 36" in width. Stair carriages must be cut from 2x12 stock, except for uncut stringers, 2x10 stock may be used. Riser height must be uniform within 3/8" between the largest and smallest riser in the stair. Each riser shall be between 4 and 8-1/4 inches high. Tread depth within the flight of stairs must be equal and must have a minimum depth of 10 inches to include the nosing. Handrails must be provided on all flights of stairs containing more than 2 risers. Stairs that rise greater than 30 inches above the ground or adjacent walking surfaces must be provided with guards to prevent falling. When provided, landings for stairs shall be a minimum of 36 inches square.

HANDRAILS

Required handrails shall be provided on a minimum of one side and be mounted 34 to 38 inches, measured vertically from the nosing of the treads. Handrails shall be smooth, provide a graspable surface and be continuous for the full length of the flight of stairs.



GUARDRAILS

Guards shall be required on all decks higher than 30 inches above the adjacent grade or surface and as required on all stairs. Guards shall be a minimum of 36 inches high and have opening limitations no greater than 4 inches. Required guards along open sides of stairs shall be a minimum of 34 inches in height measured vertically from the nosing of the tread.

INSPECTIONS

Footing – Prior to pouring concrete.
Framing – For decks less than 30" above the ground.
Final – After completion of the deck

